

REMARKS

Claims 1-6 and 9-21 remain pending in the present application. New claims 9-21 were added to claim subject matter in the specification. The scope of independent claims 9 and 13 is at least as broad as original claims 6 and 1, respectively. All the present claims are believed to be clear and definite and are believed to be patentably distinguished over the prior art of record. Consideration of the pending claims and allowance is respectfully requested in view of the following comments.

The 35 U.S.C. §132 objection to the Specification

The Examiner has objected to Applicant's amendment mailed January 8, 2002 in response to an office action dated September 18, 2001. The objection is pursuant to 35 U.S.C. §132 on the grounds that Applicant's January 8, 2002 amendment introduces new matter. Applicant respectfully disagrees.

As detailed in the VERSION WITH MARKING TO SHOW CHANGES MADE to the Specification that was attached to Applicant's January 8, 2002 amendment, Applicant has simply removed formulas depicted in the figures and added them to the written detailed description of the specification. More specifically, Applicant has removed the characteristic equation from Fig. 1 and added the equation to Paragraph 23 of the specification. Further, Applicant has removed the characteristic null equation depicted on Figs. 2a-2c and added the equation to Paragraph 24 of the detailed description. The proposed drawing corrections removing these equations from Figs. 1 and 2a-2c were approved by the Examiner. For the foregoing reasons, Applicant respectfully requests the Examiner to remove objections to Applicant's January 8, 2002 amendments to the specification.

Claim Rejections pursuant to 35 U.S.C. §112, second paragraph

Claim 6 was rejected pursuant to 35 U.S.C. §112, second paragraph. Claim 6 has been amended as the Examiner has recommended as detailed in the attached VERSION WITH MARKINGS TO SHOW CHANGES MADE. Claim 6 was also amended as shown to maintain antecedent basis. Accordingly, Applicant respectfully requests the removal of the rejection of claim 6 pursuant to 35 U.S.C. §112, second paragraph.

Claim Rejections pursuant to 35 U.S.C. §102(b)

Claims 1, 4 and 5 were rejected pursuant to 35 U.S.C. §102(b) as being anticipated by Chew et al. (U.S. Patent No. 5,107,491 hereinafter referred to as "Chew"). Applicant respectfully disagrees for at least the following reasons.

Amended claim 1 discloses an active low-pass filter system that includes a low-pass filter circuit and an isolated-integrator band-reject filter. The low-pass filter circuit includes a resistive forward signal flow branch. The isolated-integrator band-reject filter is imbedded within the low pass filter circuit and forms part of the resistive forward signal flow branch. Claim 1 was amended to more clearly disclose that the isolated-integrator band-reject filter is imbedded within the low-pass filter circuit as detailed in the attached VERSION WITH MARKINGS TO SHOW CHANGES MADE.

Chew teaches, in Fig. 1, a single low pass filter stage 12 and a notch filter stage 14 (band reject filter). The output 40 of the low pass filter stage 12 is coupled to the input 42 of the notch filter stage 14. In contradistinction to Chew, claim 1 discloses that the isolated-integrator band-reject filter is imbedded within the low pass filter circuit and is part of the resistive forward signal flow branch. Referring to Figs. 2a-2c and 4, it is clearly illustrated that coupling of the isolated-integrator band-reject filters (20) with the resistive forward signal flow branch(es) does not occur at the output (Out) of the low pass filter circuit (22, 24, 26, 28, 30). (see specification paragraphs 24, 26, 28 and 44) Accordingly, the isolated-integrator band-reject filter is not

coupled with an output of the low pass filter circuit as taught by Chew, and Chew does not suggest or disclose the configuration disclosed by claim 1. In fact, Chew does not teach a resistive forward signal flow branch in a low pass filter circuit at all. Accordingly, Applicant respectfully requests the Examiner to withdraw the rejections pursuant to 35 U.S.C. §102(b) of claim 1 and corresponding dependent claims 4 and 5 which depend therefrom.

Claim Rejections pursuant to 35 U.S.C. §103(a)

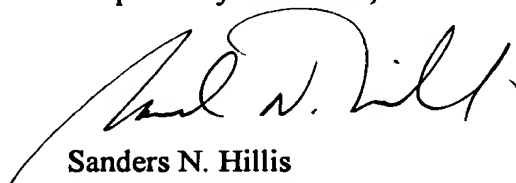
Claim 2 was rejected pursuant to 35 U.S.C. §103(a) as being anticipated by Chew in view of prior art Fig. 1 of Applicant's specification. Claim 3 was rejected pursuant to 35 U.S.C. §103(a) as being anticipated by Chew in view of Sallen et al. Applicant respectfully traverses these rejections for at least the following reasons.

Chew has been discussed previously. The Examiner has postulated that it would have been obvious for one skilled in the art to use the prior art Fig. 1 isolated-integrator band-reject filter for the notch filter of Chew. As previously discussed, Chew fails to teach, suggest or disclose that the isolated-integrator band-reject filter is part of the resistive forward signal flow branch of a low-pass filter circuit. As such, including a resistor for tuning within the low-pass filter circuit as disclosed by claim 2 is clearly not obvious. Following the teaching of Chew and prior art Fig. 1 provides the resistor for tuning beyond the output of a low pass filter not imbedded within the low pass filter as disclosed by claims 1 and 2. Similarly, including the isolated-integrator band-reject filter as part of the resistive forward signal flow branch of a Sallen & Key filter is clearly not obvious. The combined teaching of Chew and Sallen et al. at best provides a notch filter coupled to the output of a Sallen & Key filter, not an isolated-integrator band-reject filter imbedded within a Sallen & Key filter as disclosed by claims 1 and 3. Accordingly, for at least the foregoing reasons, Applicant respectfully requests the removal of the 35 U.S.C. §103(a) rejection of claims 2 and 3.

Similarly, with regard to independent claim 13, none of the prior art of record teaches, suggest or discloses an isolated-integrator band-reject filter incorporated into a low pass filter circuit between an input terminal and an output terminal of the low pass filter circuit.

Applicant believes that claims 1-6 and 9-21 are allowable in their present form and that this application is in condition for allowance. Accordingly, it is respectfully requested that the Examiner so find and issue a Notice of Allowance in due course. Should the Examiner deem a telephone conference to be beneficial in expediting allowance of this application, the Examiner is invited to call the undersigned attorney at the telephone number listed below. No fees are believed to be due at this time, however, should any fees be deemed required, please charge such fees therefor to Deposit Account No. 23-1925.

Respectfully submitted,



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Attachments: VERSION WITH MARKINGS TO SHOW CHANGES MADE pg. 9

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

Please amend Claims 1 and 6 and add Claims 9-10 as follows:

1. (Amended) An active low-pass filter system including:
a low-pass filter circuit including a resistive forward signal flow branch; and
an isolated-integrator band-reject filter [coupled to] imbedded within the low-pass filter circuit, wherein the isolated-integrator band-reject filter forms part of the resistive forward signal flow branch.

6. (Twice Amended) A power amplifier system for driving a load comprising:
a pulse width modulation power circuit creating ripple spectra;
an error amplifier and modulator circuit connected to an input of the pulse width modulation power circuit;
a demodulation filter connected between said pulse width modulation power circuit and the load;
a feedback control loop coupled to said error amplifier and modulator [pulse width modulation power] circuit and including:
an active low-pass filter;
a first resistive voltage divider circuit coupled between the output of said demodulation filter and a first input of said low-pass filter;
a feedback demodulation filter coupled to a second input of said low-pass filter and including at least one isolated-integrator band-reject filter; and
a second resistive voltage divider circuit coupled between the output of said pulse width modulation power circuit and said feedback demodulation filter.

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